UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,010	02/26/2004	Pierte Roo	MP0039.C1	3556

26703 7590 11/15/2006

HARNESS, DICKEY & PIERCE P.L.C.
5445 CORPORATE DRIVE
SUITE 400
TROY, MI 48098

EXAMINER	
YUN, EUGENE	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/786,010	ROO, PIERTE	
	Examiner	Art Unit	
	Eugene Yun	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28-75 and 88-120* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *28-51,54-59,62-67,70-75 and 88* is/are allowed.

6)☒ Claim(s) *52,53,60,61,68,69,89-96,104,112 and 120* is/are rejected.

7)☒ Claim(s) *97-103,105-111 and 113-119* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 52, 53, 60, 61, 68, 69, 89-96, 104, 112, and 120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yip et al. (US 5,790,658) in view of Patel et al. (US 5,175,764).

Referring to Claim 52, Yip teaches A communication system including a first transmission channel with a first end and a second end, the first end coupled to a first transformer and the second end coupled to a second transformer, a first end transceiver transmitting and receiving signals via the first transformer and a second end transceiver transmitting and receiving signals via the second transformer, a first signal being supplied at the first end, the first signal comprising a transmission signal component of the first transceiver and a receive signal component from the second transceiver (see col. 5, lines 32-44), said communication system comprising:

a replica transmitter that generates a replica of the transmission signal component of the first transceiver (see col. 5, lines 45-48);

a filter to filter the replica signal (see col. 5, lines 48-50); and

an active resistive summer receiving the first signal, and the filtered replica signal as inputs, to reduce the transmission signal component at an output of the active resistive summer (see col. 5, lines 50-54).

Yip does not teach the active resistive summer including a feedback element. Patel teaches the active resistive summer including a feedback element for communicating between the inputs and the outputs (see col. 10, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Patel to the device of Yip in order to better prevent the use of excessive amounts of power.

Claims 60 and 68 have similar limitations as claim 52.

Referring to Claim 89, Yip teaches an electrical circuit for reducing a transmission signal comprising:

means for active summing including a positive input terminal, a negative input terminal, and an output terminal (see col. 5, lines 50-54), said active summing means further comprising:

means for communicating with the negative input terminal and a composite signal, the composite signal having a transit signal component and a receive signal component (see col. 5, lines 32-39); and

means for communicating with the negative input terminal and a replica of the transmit signal (see col. 5, lines 45-48).

Yip does not teach feedback means for communicating with the output terminal and the negative input terminal. Patel teaches feedback means for communicating with

the output terminal and the negative input terminal (see col. 10, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Patel to the device of Yip in order to better prevent the use of excessive amounts of power.

Referring to Claim 90, Yip teaches an apparatus for reducing transmission noise in a communications channel, comprising:

An input to receive a near end transmit signal (see col. 5, lines 32-36);

An input to receive a far end receive signal (see col. 5, lines 36-39);

An input to receive a replica of transmission noise in the transmit signal (see col. 5, lines 45-48); and

A summer connected to all three inputs and providing an output which reduces the transmission noise of the transmit signal (see col. 5, lines 50-54).

Yip does not teach the summer including a feedback element. Patel teaches the summer including a feedback element for communicating between the inputs and the outputs (see col. 10, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Patel to the device of Yip in order to better prevent the use of excessive amounts of power.

Referring to Claim 91, Yip also teaches a replica signal generator to provide the replica to the replica input (see col. 5, lines 45-48).

Claims 93 and 94 have similar limitations as claims 90 and 91.

Referring to Claims 53, 61, 69, 92, and 95 Patel also teaches the active resistive summer comprising an operational amplifier (see col. 10, lines 60-65).

Referring to Claim 96, Yip teaches an electrical circuit in a communications channel comprising:

An active resistive summer (see col. 5, lines 50-54);

Wherein the active resistive summer comprises:

An input for a composite signal, the composite signal including a transmission signal component and a receive signal component (see col. 5, lines 32-44);

An input for a replica transmission signal (see col. 5, lines 45-48); and

An output for a receive signal which comprises the composite signal minus the replica signal (see col. 5, lines 48-50).

Yip does not teach the active resistive summer comprising an operational amplifier with an inverting feedback. Patel teaches the active resistive summer comprising an operational amplifier with an inverting feedback (see col. 10, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Patel to the device of Yip in order to better prevent the use of excessive amounts of power.

Claims 104, 112, and 120 have similar limitations as claim 96.

Allowable Subject Matter

3. Claims 97-103, 105-111, and 113-119 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claims 97, 105, and 113, Yip and Patel do not teach, alone nor in combination, a feedback element in communication with the output terminal and the second polarity input terminal, a first resistor in communication with the second polarity input terminal and the composite signal, and a second resistor in communication with the second polarity input terminal and the filtered replica transmission signal.

4. Claims 28-51, 54-59, 62-67, 70-75, and 88 are allowed.

Regarding Claims 28, 36, 44, 54, 62, 70, and 88, Yip and Chan do not teach, alone nor in combination, a feedback element in communication with the output terminal and the second polarity input terminal, a first resistor in communication with the second polarity input terminal and the measured/composite signal, and a second resistor in communication with the second polarity input terminal and the filtered replica transmission signal.

Response to Arguments

5. Applicant's arguments with respect to claims 52, 53, 60, 61, 68, 69, 89-96, 104, 112, and 120 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Yun whose telephone number is (571) 272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eugene Yun
Examiner
Art Unit 2618

EY

MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER